January 1972

Test 1100: John Deere 6030 Diesel 8-Speed

Tractor Museum
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NEBRASKA TRACTOR TEST 1100 – JOHN DEERE 6030 DIESEL
8 SPEED

POWER TAKE-OFF PERFORMANCE

Hp	Crankshaft speed rpm	Fuel Consumption Gal per hr	Fuel Consumption Lb per hp-hr	Hp-hr per gal	Temperature Degrees F Cooling medium	Air wet bulb	Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—1024 rpm)								
175.99	2100	11.123	0.437	15.82	188	65	75	28.850
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
154.52	2166	10.228	0.458	15.11	180	63	74	.....
0.00	2248	3.090	.....	.....	173	64	76	.....
78.87	2211	6.614	0.580	11.92	184	64	75	.....
173.76	2101	11.173	0.445	15.55	187	64	75	.....
39.71	2234	4.811	0.839	8.25	172	65	76	.....
116.97	2189	8.486	0.502	13.78	182	64	75	.....
Av. 93.97	**2191**	**7.400**	**0.545**	**12.70**	**180**	**64**	**75**	**28.870**

DRAWBAR PERFORMANCE

Hp	Drawbar pull lbs	Speed miles per hr	Crankshaft speed rpm	Fuel Consumption Slip of drivers %	Gal per hr	Lb per hp-hr	Hp-hr per gal	Temp Degrees F Cooling med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITHOUT BALLAST											
Maximum Available Power—Two Hours—4th Gear											
148.70	10680	5.22	2101	7.20	10.997	0.511	13.52	200	76	84	28.910
75% of Pull at Maximum Power—Ten Hours—4th Gear											
122.73	8276	5.56	2180	4.72	9.647	0.544	12.72	185	62	76	28.753
50% of Pull at Maximum Power—Two Hours—4th Gear											
83.53	5478	5.72	2206	3.22	7.566	0.627	11.04	180	68	83	28.970
50% of Pull at Reduced Engine Speed—Two Hours—5th Gear											
83.87	5507	5.71	1765	3.22	6.356	0.524	13.19	183	78	86	28.977
MAXIMUM POWER WITHOUT BALLAST											
119.98	15303	2.94	2190	14.93	2nd Gear.....			182	73	78	28.930
147.88	13625	4.07	2097	10.24	3rd Gear.....			185	71	79	28.930
153.65	11063	5.21	**2097**	7.24	4th Gear.....			188	70	77	28.930
155.42	8770	6.65	2100	5.31	5th Gear.....			193	69	75	28.940
153.91	6469	8.92	2100	3.79	6th Gear.....			192	73	83	28.940

VARYING DRAWBAR PULL AND TRAVEL SPEED WITHOUT BALLAST—4th Gear

Pounds Pull	11063	12398	13350	13025	11864	10264
Horsepower	153.65	152.97	143.76	122.73	97.01	71.34
Crankshaft Speed rpm	**2097**	1891	1676	1460	1249	1045
Miles Per Hour	5.21	4.63	4.04	3.53	3.07	2.61
Slip of Drivers %	7.24	8.73	10.03	9.60	8.43	6.94

TRACTOR SOUND LEVEL WITH CAB	**dB(A)**
Maximum Available Power 2 Hours	87.0
75% of Pull at Max. Power 10 Hours	86.5
50% of Pull at Max. Power 2 Hours	86.5
50% of Pull at Reduced Engine Speed 2 Hours	85.0
Bystander (8th gear)	86.0

TIRES, BALLAST AND WEIGHT		**Tested Without Ballast**
Rear Tires	—No., size, ply & psi	Four 20.8-38; 10; 16
Ballast	—Liquid	None
	Cast Iron	None
Front Tires	—No., size, ply & psi	Two 14L-16A; 6; 24
Ballast	—Liquid	None
	Cast Iron	None
Height of drawbar		24 inches
Static weight with operator—rear		12990 lb
front		5190 lb
total		18180 lb

Department of Agricultural Engineering
Dates of Test: May 23 to June 2, 1972
Manufacturer: JOHN DEERE WATERLOO TRACTOR WORKS, Waterloo, Iowa

FUEL, OIL AND TIME Fuel No. 2 Diesel **Cetane No.** 50.1 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60°** 0.8314 **Weight per gallon** 6.922 lb **Oil SAE** 30 **API service classification** John Deere TORQ-GARD or MS DG DM DS **To motor** 5.653 gal **Drained from motor** 5.378 gal **Transmission and final drive lubricant** John Deere Special 303 oil **Total time engine was operated** 41½ hours.

ENGINE Make John Deere Diesel **Type** 6 cylinder vertical with turbo-charger and intercooler **Serial No.** 6531AR-03 281534R **Crankshaft Mounted** lengthwise **Rated rpm** 2100 **Bore and stroke** 4.75" x 5.00" **Compression ratio** 15.4 to 1 **Displacement** 531 cu. in. **Cranking system** 12 volt electrical (two 6 volt batteries) **Lubrication** pressure **Air cleaner** two paper elements with aspirator **Oil filter** full flow with replaceable paper cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil **Fuel filter** sediment bowl with screen and replaceable paper primary and secondary filter elements **Muffler** was used **Cooling medium temperature control** 3 thermostats.

CHASSIS Type standard with duals **Serial No.** B313-RO33209R **Tread width** rear 63" to 120" front 64.5" to 81.5" **Wheel base** 104" **Center of gravity** (without operator or ballast with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 29.3" Vertical distance above roadway 38.1" Horizontal distance from center-line of rear wheel tread 0.1" to the right **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Advertised speeds mph** first 2.1, second 3.2, third 4.5, fourth 5.5, fifth 6.9, sixth 9.0, seventh 11.6, eighth 19.2, reverse 4.9 and 7.6 **Clutch** dry dual disc operated by foot pedal **Brakes** wet disc hydraulically power actuated by two foot pedals that can be locked together **Steering** hydrostatic **Turning radius** on concrete surface with brake applied) right 156" left 156" (on concrete surface without brake) right 179" left 179" **Turning space diameter** (on concrete surface with brake applied) right 324" left 324" (on concrete surface without brake) right 370" left 370" **Power take-off** 1024 rpm at 2100 engine rpm.

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure. First gear was not run as it was necessary to limit the pull in second gear to avoid excessive wheel slippage. Seventh and eighth gears were not run as test procedure requires only one speed over 8 miles per hour.

We, the undersigned, certify that this is a true and correct report of official Tractor Test **1100.**

L. F. LARSEN
Engineer-in-Charge

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